

Listing of Claims

1. **(Original)** A novel architecture for set associative cache, comprising:
 a set associative cache having a plurality of ways wherein the ways are segmented into a plurality of banks and wherein a first way has a fast access time;
 access control logic which manages access to the cache and is coupled to said plurality of ways;
 a plurality of muxes coupled to said first way in each of said banks and coupled to said access control logic; and
 wherein the access control logic controls the mux in a bank to remap any defective way in a bank to the first way in that same bank.
2. **(Original)** The architecture of claim 1 wherein said first way has a faster access time because it has a physically shorter path to said access control logic.
3. **(Original)** The architecture of claim 1 further comprising self test logic coupled to said access control logic to test the cache for defects.
4. **(Original)** The architecture of claim 3 wherein said self test logic tests the cache for defects on power up.
5. **(Original)** The architecture of claim 3 wherein said self test logic stores the location of defects in a status register.
6. **(Original)** The architecture of claim 5 wherein said access control logic reads the location of defects in the cache from the status register to determine proper control of said muxes.

7. **(Original)** The architecture of claim 1 wherein said set associative cache has a data array having a plurality of ways wherein the ways are segmented into a plurality of banks and wherein a first way has a faster access time.

8. **(Original)** The architecture of claim 1 comprising a plurality of ways having a fast access time and a plurality of muxes coupled to said plurality of ways in each of said banks and coupled to said access control logic.

9. **(Original)** The architecture of claim 8 wherein the access control logic controls the plurality of muxes in a bank to remap any defective way in a bank to a different way in that same bank.

10.-12. **(Canceled).**

13. **(Previously presented)** A microprocessor die, comprising:
self test logic which tests the die for defects;
a set associative cache having a plurality of ways that are each segmented into a plurality of banks;
access control logic coupled to said self test logic and coupled to said plurality of ways in said cache;
wherein each bank includes a first way that has a physically shorter path to said access control logic; and
a plurality of muxes each coupled to a corresponding first way in each of said plurality of banks and coupled to said access control logic,
wherein the access control logic controls the mux in a given bank to remap any defective way in that bank to the first way in that same bank.

14. **(Original)** The microprocessor die of claim 13 comprising a plurality of ways having a physically shorter path to said access control logic and a plurality of muxes coupled to said plurality of ways in each of said banks and coupled to said access control logic.

15. **(Original)** The microprocessor die of claim 14 wherein the access control logic controls the plurality of muxes in a bank to remap any defective way in a bank to a different way in that same bank.

16.-18. **(Canceled)**.

19. **(Previously presented)** A method of absorbing defects in a set associative cache, comprising:

providing a set associative cache with a plurality of ways wherein the ways are segmented into a plurality of banks and wherein a first way in each bank has a fastest access time;

providing a mux in each bank coupled to said first way in that bank; and

using the mux in a bank to remap any defective way in a bank to the first way in that same bank.

20. **(Original)** The method of claim 19 further comprising the step of testing for errors in the cache.

21. **(Original)** The method of claim 19 further comprising the step of disabling a way in a bank when that way is defective.

22. **(Original)** The method of claim 19 comprising a plurality of ways having a fast access time and a plurality of muxes coupled to said plurality of ways in each of said banks.

23. **(Original)** The method of claim 22 wherein the plurality of muxes in a bank are used to remap any defective way in a bank to a different way in that same bank.

24. **(Previously presented)** A computer system, comprising:
- a power supply;
 - a microprocessor comprising:
 - a set associative cache having a plurality of ways that are each segmented into a plurality of banks;
 - access control logic coupled to said self test logic and coupled to said plurality of ways in said cache;
 - wherein each bank includes a first way segment that has a physically shorter path to said access control logic; and
 - a plurality of muxes each coupled to a corresponding first way segment in each of said plurality of banks and coupled to said access control logic; and,
 - wherein the access control logic controls the mux in a given bank to remap any defective way segment in that bank to the first way segment in that same bank.